

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-010502**Date Inspected:** 05-Dec-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Li Yang**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG Trail Assembly**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector, S. Manjunath Math was present during the time noted above for observations relative to the work being performed.

This QA Inspector randomly observed the following work in progress:

Orthotropic Box Girder (OBG) Trial Assembly Areas

Segment 6AE

This Quality Assurance (QA) Inspector witnessed final tension verification for T-Ribs Connecting Clips at Bottom Panel, Side Panel Cross Beam side and Side Panel Bike Path side at Panel Point (PP) 37, PP 38, PP 39 and PP 40 for Segment 6AE. Inspected 10% on a random basis and found the tension to be in general compliance.

Bolt sizes used were M16 x 45 RC Set# DHGM160001 and final torque required was 210 N-m.

Bolt sizes used were M16 x 50 RC Set# DHGM160004 and final torque required was 180 N-m and

Bolt sizes used were M16 x 65 RC Set# DHGM160006 and final torque required was 180 N-m.

Manual Torque wrench was been used with Sr. No. XQ2-118.

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Segment 6BE

This Quality Assurance (QA) Inspector witnessed final tension verification for T-Ribs Connecting Clips at Bottom Panel, Side Panel Cross Beam side and Side Panel Bike Path side at Panel Point (PP) 41, PP 42, and PP 43 for Segment 6BE. Inspected 10% on a random basis and found the tension to be in general compliance.

Bolt sizes used were M16 x 45 RC Set# DHGM160001 and final torque required was 210 N-m and

Bolt sizes used were M16 x 65 RC Set# DHGM160006 and final torque required was 180 N-m.

Manual Torque wrench was been used with Sr. No. XQ2-118.

Segment 6AE

This Quality Assurance (QA) Inspector witnessed final tension verification for Side Panel to Side Panel T-Ribs at Panel Point (PP) 38 and PP 39 for Segment 6AE. Inspection Notification was been cancelled by ABF Engineer Mr. David Wu due.

Signed Off Green Tag's

This Quality Assurance (QA) Inspector witnessed final tension verification for following depicted locations. Inspected 10% on a random basis and found the tension to be in general compliance and thus signed off the Green Tags.

At Segment 5AW, 5BW and 5CW at Panel Point (PP) 29 to PP 36 for Catwalk Support Bolt Size used was M16 x 45 RC Set# DHGM160010 and M16 x 50 RC Set# DHGM160011 and final torque required was 200 N-m respectively and Green Tag No. 475.

At Segment 5AW, 5BW and 5CW at Panel Point (PP) 29 to PP 36 for Catwalk Support Bolt Size used was M16 x 40 RC Set# DHGM160009 and RC Set# DHGM160019 and final torque required was 200 N-m respectively and Green Tag No. 476.

At Segment 1AW and 1BW at Panel Point (PP) 10 and 10.5 Vertical Segment Splice to Longitudinal Diaphragm (North and South) and Bolt Size used was M22 x 75 RC Set# DHGM220034 and final torque required was 453 N-m and Green Tag No. 477.

At Segment 1AW and 1BW at Panel Point (PP) 10 and 10.5 Vertical Segment Splice to Longitudinal Diaphragm (North and South) and Bolt Size used was M24 x 75 RC Set# DHGM240020 and final torque required was 600 N-m and Green Tag No. 478.

At Segment 1AW and 1BW at Panel Point (PP) 10 and 10.5 Vertical Segment Splice to Longitudinal Diaphragm (North and South) and Bolt Size used was M24 x 100 RC Set# DHGM240022 and final torque required was 527 N-m and Green Tag No. 479.

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At Segment 1AW and 1BW at Panel Point (PP) 10 and 10.5 Longitudinal Stiffener to Floor Beam Stiffener (1800mm above Bottom Panel – North and South side) and Bolt Size used was M22 x 90 RC Set# DHGM220048 and final torque required was 500 N-m and Green Tag No. 480.

At Segment 1AW and 1BW at Panel Point (PP) 10 (East) Longitudinal Stiffener to Floor Beam Stiffener (1800mm above Bottom Panel – North and South side) and Bolt Size used was M24 x 90 RC Set# DHGM240028 and final torque required was 540 N-m and Green Tag No. 481.

Segment 6BE to 6CE

This QA Inspector observed ZPMC welding personnel performing Flux Cored Arc Welding (FCAW) for Segment to Segment Transverse Splice Weld between PP 43 and PP 44. The welder was identified as 220063 and 053742. The Weld joint is identified as OBE6C-004 for Bottom Panel to Bottom Panel. In process FCAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-T-2231T.

Segment 6BE to 6CE

This QA Inspector observed ZPMC welding personnel performing Flux Cored Arc Welding (FCAW) for Segment to Segment Transverse Splice Weld between PP 43 and PP 44. The welder was identified as 220067 and 220069. The Weld joint is identified as OBE6C-003 for Side Panel to Side Panel Cross Beam Side. In process FCAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-T-2233T.

Segment 5CW to 6AW

This QA Inspector observed ZPMC welding personnel performing Flux Cored Arc Welding (FCAW) for T-Rib Hold Back areas between PP 36 and PP 37. The welder was identified as 066674 and 066746. The Weld joint is identified as SP-147-001-025/026/027 and 028 and SP-120-001-029/030/031 and 032 for Side Panel to Side Panel Counter Weight Side. In process FCAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-T-2132.

Segment 5CW to 6AW

This QA Inspector observed ZPMC welding personnel performing Flux Cored Arc Welding (FCAW) for T-Rib Hold Back areas between PP 36 and PP 37. The welder was identified as 067876 and 067947. The Weld joint is identified as SP-750-001-029/030/031 and 032 and SP-512-001-025/026 and 027 for Side Panel to Side Panel Cross Beam Side. In process FCAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-T-2132.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

Summary of Conversations:

No relevant conversations.

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Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact , who represents the Office of Structural Materials for your project.

Inspected By:	Math,Manjunath
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Quality Assurance Inspector

Reviewed By:	Miller,Mark
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QA Reviewer
